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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/763,256

01/26/2004

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EXAMINER

AMADIZ, RODNEY

ART UNIT

PAPER NUMBER

2629

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

03/26/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/763,256

Applicant(s)

TOMISAWA, ISAO

Examiner

Rodney Amadiz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/17/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-5, 7-12 and 15-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Hiroaki (U.S. Patent 6,661,425—herein referred to as “Hiroaki”).

As to **Claim 1**, Hiroaki teaches an apparatus for displaying a three-dimensional image of an object to be displayed, through a superimposing of a plurality of images of said object (***Col. 8, lines 50-61***), which are placed so as to be apart from each other on a line of sight of an observer (***See Fig. 6***), comprising: a plurality of display units disposed in tandem on said line of sight (***Fig. 1, Reference Numbers 122 and 123 and Fig. 6***), each of said plurality of display units comprising at least one screen section for displaying at least one image of said plurality of images (***Abstract- display image plane, Col. 5, lines 8-26 and Col. 9, lines 28-37***); and a display image control unit for displaying a screen section-adjustment image on each of said plurality of display units, to enable the three-dimensional image to be displayed, in case where the observer is

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placed in a predetermined observation position (**Fig. 1, Reference Numbers 100 and 110 and Fig. 6**).

As to **Claim 2**, Hiroaki teaches a display mode control unit for making a change in a display mode for said screen section-adjustment image (**Fig. 1, Reference Number 110**), which is displayed on at least one display unit of said plurality of display units (**Col. 9, lines 17-37**); and an input unit for enabling instructions on change in said display mode to be inputted into said display mode control unit (**Fig. 1, Reference Number 125**).

As to **Claim 3**, Hiroaki teaches said input unit comprising an external input device through which an external input operation is to be carried out (**Col. 19, lines 50-56 and Col. 17, lines 61-64**).

As to **Claim 4**, Hiroaki teaches said display mode control unit configured to enable said at least one display unit to shift in a predetermined direction (**Fig. 1, Reference Numbers 111 and 121 and Col. 17, lines 58-60**); and said input unit enables instructions to shift said at least one display unit in said predetermined direction by a predetermined distance to be inputted into said input unit (**Col. 17, lines 61-64**).

As to **Claim 5**, Hiroaki teaches said display mode control unit configured to enable an apparent distance between adjacent two display units of said plurality of display units to vary (**Fig. 1, Reference Numbers 111 and 121 and Col. 17, lines 58-60**); and said input unit enables instructions to vary said apparent distance to a predetermined distance to be inputted into said input unit (**Col. 17, lines 61-64**).

As to **Claim 7**, Hiroaki teaches said display mode control unit configured to

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enable said at least one screen section to be scaled (**Col. 12, lines 43-47**); and said input unit enables instructions to scale said at least one screen section at a predetermined magnification to be inputted into said input unit (**Col. 17, lines 61-64**).

As to **Claim 8**, Hiroaki teaches said display mode control unit configured to enable brightness of at least one part of said at least one screen section to vary (**Col. 15, lines 34-37 and 45-50**); and said input unit enables instructions to vary the brightness of said at least one part to be inputted into said input unit (**Col. 17, lines 61-64**).

As to **Claim 9**, Hiroaki teaches said display mode control unit configured to enable chromaticity of at least one part of said at least one screen section to vary (**Col. 14, lines 32-35**); and said input unit enables instructions to vary the chromaticity of said at least one part to be inputted into said input unit (**Col. 17, lines 61-64**).

As to **Claim 10**, Hiroaki teaches said display mode control unit configured to enable distortion of at least one part of said at least one screen section to vary (**Col. 14, line 43**); and said input unit enables instructions to vary the distortion of said at least one part to be inputted into said input unit (**Col. 17, lines 61-64**).

As to **Claim 11**, Hiroaki teaches said display mode control unit configured to enable an inclination angle of at least one part of said at least one screen section to vary (**Col. 19, lines 43-49**); and said input unit enables instructions to vary the inclination angle of said at least one part to be inputted into said input unit (**Col. 17, lines 61-64**).

As to **Claim 12**, Hiroaki teaches said display mode control unit applying signal processing to an image signal supplied to said at least one display unit to make a change in the display mode for said screen section-adjustment image (***Fig. 1 note output of Controller Module 111 and output of Control Unit 110***).

As to **Claim 15**, Hiroaki teaches of said plurality of display units, at least one display unit other than a display unit, which is disposed on a rearmost side in a viewing direction of said observer, comprises a translucent display device (***Col. 18, lines 29-51***).

As to **Claim 16**, Hiroaki teaches said translucent display device comprising a liquid crystal display device (***Col. 18, lines 29-51***).

As to **Claim 17**, Hiroaki teaches said plurality of display units comprising at least one composite display unit, which is obtained thorough composition by means of a half mirror (***Fig. 5 and Reference Number 124***).

As to **Claim 18**, Hiroaki teaches a method for displaying a three-dimensional image of an object to be displayed, through a superimposing of a plurality of images of said object (***Col. 5, lines 8-26***), which are placed so as to be apart from each other on a line of sight of an observer (***See Fig. 6***), said method comprising: an image signal generation step for generating a screen section-adjustment image (***Fig. 1, Reference Number 100***), which enables the three-dimensional image to be displayed on each of a plurality of display units (***Col. 5, lines 8-26***), in case where the observer is placed in a predetermined observation position (***See Fig. 6***); and a display image control step for displaying said screen section-adjustment image (***Fig. 1, Reference Number 110***),

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which has been generated by said image signal generation step, on said each of said plurality of display units.

As to **Claim 19**, Hiroaki teaches a display mode control step for making a change in a display mode for said screen section-adjustment image (**Fig. 1, Reference Number 110**), which is displayed on at least one display unit of said plurality of display units (**Col. 9, lines 17-37**); and an input step for inputting instructions on change in said display mode (**Fig. 1, Reference Number 125 and Col. 17, lines 38-64**).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 6, 13, 14 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hiroaki in view of Jeong (U.S. Patent 6,281,895—herein referred to as “Jeong”).

As to **Claim 6**, Hiroaki fails to teach said display mode control unit configured to enable said at least one screen section to shift on a plane, which intersects said line of sight; and said input unit enables instructions to shift said at least one screen section by a predetermined distance to be inputted into said input unit. Examiner cites Jeong to

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teach mode control unit configured to enable said at least one screen section to shift on a plane, which intersects said line of sight (***Figs. 7E and 7F and Col. 7, line 66—Col. 8, line 25***); and said input unit enables instructions to shift said at least one screen section by a predetermined distance to be inputted into said input unit (***Figs. 7E and 7F, Reference Numbers 23-26 and Col. 7, line 66—Col. 8, line 25***). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to enable a display system to shift a screen section by a predetermined distance using an input device as taught by Jeong in the three-dimensional display apparatus taught by Hiroaki in order to adjust an image to ones liking on the screen.

As to **Claims 13 and 20**, Hiroaki fails to teach a record unit for recording state information on a predetermined state of said apparatus. Examiner cites Jeong to teach a record unit for recording state information on a predetermined state of said apparatus (***Col. 4, lines 55-60***). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to incorporate the use of a recording unit as taught by Jeong in the three-dimensional display apparatus taught by Hiroaki in order to save the display functions that a user deems appropriate (***Jeong—Col. 4, lines 55-60***).

As to **Claim 14**, Hiroaki fails to teach said input unit enabling any one of said state information to be selected and enable instructions to make a change in the display mode based on said anyone as selected to be inputted into said input unit. Examiner cites Jeong to teach input unit enabling any one of said state information to be selected and enable instructions to make a change in the display mode based on said anyone as selected to be inputted into said input unit (***Col. 4, lines 14-17 and 45-64 and Col. 8,***

lines 25-30). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to incorporate the use of an input unit to chance the mode of the predetermined functions as taught by Jeong in the three-dimensional display apparatus taught by Hiroaki in order to facilitate the means as to which a user can manipulate the display functions.

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Inquiries

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rodney Amadiz whose telephone number is (571) 272-7762. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on (571) 272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

R.A.

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